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April 2, 2002

Senate Subcommittee on Science, Technology, and Space
Senate Committee on Commerce, Science, and Transportation
Washington, DC 20610-6125

Re: Hearing on Biotechnology in Portland, Oregon, April 5, 2002

Dear Senators,

Thank you for providing this opportunity to share with you the potential for biotechnological development in Portland. We Portlanders take great pride in the city we've built. Many of the features that distinguish our city from others result from thoughtful planning and effective implementation. Our successes are attributable to taking the long view on difficult issues, and then assembling the tools to carry off dramatic changes.

When she hired me two years ago, Mayor Vera Katz asked that I encourage the City to think boldly in terms of future development. This future development is tied to the interrelationship between the environment, economics, and urban form. Since my hire, I have believed that bioscience and related knowledge-based industries fit well with Portlanders' desires for economic development and enhanced livability. Two projects currently underway allowed me to test this hunch:

- Our Marquam Hill Plan addresses long term institutional development for Oregon Health and Sciences University (OHSU), while paying close attention to reducing impacts. OHSU has emerged as one of the nation's top biomedical research institutions, and is interested in dramatically expanding its facilities in the near future.
- Our North Macadam District Plan is addressing a 130-acre "brownfields" redevelopment area along the western shore of the Willamette River. The district is a part of the Central City, and is envisioned as a vibrant urban neighborhood.

Recently, the advantages of linking the prospects of Marquam Hill and OHSU to North Macadam have become apparent. These apparent advantages called for an

independent assessment of my bioscience hunch. The Bureau of Planning commissioned a study to gauge the prospects for knowledge-based industrial development focused at the southern edge of the Central City. *Building Bioscience in Portland*, hereafter described as the “Battelle Report”, offers a key finding regarding the economic potential for continued scientific innovation in the Portland area: “Already a leader in the digital revolution of electronics, computers, communications, and informatics, Portland and Oregon possess the potential to become leaders in important ‘niches’ of the ‘bio revolution’ as well.” These advantages are addressed through the development of a Science and Technology Quarter (see map on the following page) at the southern edge of the Central City, with the following advantages:

- OHSU is reaching the developable limits of its Marquam Hill campus, and strongly prefers expansion nearby rather than in a more distant portion of the region.



- Much land at the southern edge of the Central City is ripe for redevelopment. An analysis of property values shows that as many as 170 net acres could be redeveloped over the next three

decades.

- Six science-related institutions already are located within the Science and Technology quarter, including Portland State University (PSU), the university with the highest enrollment in the state. PSU's vision is of an urban university not dissimilar from the University of Washington in Seattle or the University of California in Berkeley. The University District Plan sets forth an ambitious agenda for PSU improvements.
- Central Portland's jobs production is falling short of regional goals. A very preliminary analysis of Science and Technology Quarter jobs production indicates the capacity to accommodate more than 20,000 new jobs.
- Creation of new jobs in the Central City balances jobs and housing, puts fewer strains on the transportation system, and better uses existing infrastructure.

OHSU is Portland's largest employer, with more than 10,000 employees currently working at the topographically-constrained Marquam Hill campus. The organization has established an impressive record of success as one of the nation's leading intellectual centers for the advancement of medical technology. While the recent development of a leukemia drug (gleevec) has gained wide media attention, less known is OHSU's tremendous success in attracting National Institutes of Health (NIH) research funding. Overall annual research funding is nearing \$200 million, double the amount awarded in 1997, and four times the amount awarded in 1989.

NIH research awards are allocated through rigorous scientific evaluation. OHSU's success in receiving these awards is far above the national norm – typically, about twenty percent of proposals are funded, but OHSU's success rate is around 45 percent. NIH funding is allocated on a scientific basis, with research grants awarded only to those projects that score well in a rigorous peer review. Several related actions are coming together to support the Science and Technology Quarter:

- Last year, OHSU combined with the Oregon Graduate Institute, forming a powerful new collaboration between computer technology and medical research;
- The Oregon Legislature, through the Oregon Opportunity Fund, has earmarked \$200 million, to be matched by OHSU with as much as \$300 million, for the construction of facilities and the recruitment of researchers to fill a critical need for nearly 1.5 million square feet of research space. The total combined value of this program is \$500 million;
- North Macadam Investors (NMI) is assembling land in the North Macadam District near the base of the Ross Island Bridge, with dense horizontal mixed-use

development envisioned. Still in a preliminary phase, the development is envisioned to include OHSU administrative and research space, condominiums, apartments, retail, office, and a hotel/conference facility.

Among other conclusions, the Battelle Report notes that:

- OHSU's thirty-year plan for a 50-percent increase in jobs is achievable. Its aspiration to enter the top twenty of National Institutes of Health research awardees is also achievable, but is dependent on the development of research and support facilities.
- OHSU facilitates program synergy between patient care, education, and research, can foster collaborative ties between researchers, medical practitioners, and entrepreneurs, which positions it well for continued excellence.
- The multiple existing institutions in the Science and Technology Quarter increase the prospects for multidisciplinary cooperation in new research efforts. Ties between OHSU, PSU, the Veteran's Administration Hospital, the Northwest College of Naturopathic Medicine, the Oregon Museum of Science and Industry, and Portland Community College's Workforce Center are likely to foster increasingly collaborative efforts. Rapid transportation between Marquam Hill and the North Macadam District will be essential to the successful development of bioscience in Portland, as time between the research facility, the classroom, and the hospital bed must be minimized.
- Economic programs, including the Oregon Opportunity Fund (\$200 million of state-issued bonds to match up to \$300,000 of other funds for the development of research facilities and recruitment of experts in the field) will be necessary to enable technology transfer from research to productive entrepreneurship. Start-up technology firms, when provided adequate space and access to seed capital, are likely to spring up in close proximity to such campuses.
- Vertical development, in a Central City context, is very adaptable to bioscience development. Many facilities across the country are being built at five stories and higher, the appropriate density for Science and Technology Quarter development. The sketch on the following page shows Northwestern University's Lurie Medical Research Center, perhaps the closest approximation of a Science and Technology Quarter building. The facility is expected to employ 700 persons in a 12-story building, opening in Fall 2004. Several other similar buildings are open or are under construction.



Successful development of the Science and Technology Quarter as a biotechnology hub will not be easy. Difficult hurdles remain, especially relating to infrastructure costs. Like our downtown renaissance spurred thirty years ago by a compelling plan and effective implementation, the Science and Technology Quarter will need strong public enthusiasm and commitment, along with significant private investment. Don Mazziotti, the Executive Director of the Portland Development Commission, will provide detailed testimony regarding these needs. But to conclude my testimony, I wish to briefly describe few of the most urgent needs:

Capital Needs

- Cleanup of contaminated soils within North Macadam, along with riverbank restoration and development of the Willamette River greenway
- Construction of infrastructure, including streets and utilities.
- Improvements to the regional transportation system to allow adequate access. Development and upgrades of roadways, extensions of rail transit, improvements in pedestrian and bicycle connections all will be necessary. Several of these efforts will address regional needs through local improvements.

Organizational Needs

- Facilitation of a dialogue between six institutions regarding the development of the Science and Technology Quarter
- Encouragement of industry networking efforts, including access to seed capital for technology transfer
- A raised level of consciousness regarding educational investment. A fully utilized Science and Technology Quarter will provide jobs for Oregonians. Without improvements in the local educational system, knowledge-based industry may need to continue bringing research talent from out-of-state.

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- Rapid transit, likely through the construction of a suspended cable transportation system, between North Macadam and Marquam Hill.

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In summary, I believe the development of a biotechnology hub in Portland's Central City is an enticing and very real opportunity. The transformative economic development potential, when coupled with the opportunity to induce dramatic redevelopment, represents the kind of threshold opportunity that comes along perhaps only once each generation. Fully realizing the potential will be a collaborative effort that includes local, regional, state, and federal commitments to hard work, good plans, and excellent implementation. I am sure it can be done.

Thank you again for the opportunity to share these thoughts.

Sincerely,

Gil Kelley,
Planning Director

Attachments: *Building Bioscience in Portland* (the "Battelle Report")
 Transportation Peer Review Panel Report
 Marquam Hill Plan Alternative Location Analysis